D-BLM-K67042-CA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

970104

REGION IX

EC-2

75 Hawthorne Street
San Francisco, CA 94105-3901

MAY 27 1997

George R. Meckfessel, EIS Project Manager
Bureau of Land Management, Needles Resource Area
101 West Spikes Road
Needles, CA 92363

Dear Mr. Meckfessel:

The Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the **Castle Mountain Mine Expansion Project**. Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The DEIS analyzes the environmental impacts of approving an amendment to Castle Mountain Mine's Plan of Operations on lands managed by the Bureau of Land Management (BLM). The proposed amendments would increase the permitted surface disturbance by 490 acres to 1380 acres, and extend the operational life of the mine by 10 years. A proposed expansion of site boundaries would increase the total acreage of the Castle Mountain Mine site from 2735 acres to 3910 acres, 3645 acres of which are on BLM land.

EPA has rated this DEIS EC-2 (Environmental Concerns--Insufficient Information; see attached "Summary of the EPA Rating System"). Our specific comments are attached. We appreciate the opportunity to review this DEIS. If you have any questions regarding this comment letter, please call Leonidas Payne of my staff at (415) 744-1571.

Sincerely,

David J. Farrel, Chief
Federal Activities Office

Filename: castle.dei
MI002496

EPA expressed envir. concerns regarding acid gen. potential, cumulative impacts to Lanfair Valley aquifer, and rock competence following cessation of mining

COMMENTS ON THE CASTLE MOUNTAIN EXPANSION DEIS

1. Insofar as the Castle Mountain site will be reclaimed for use as public open space following the cessation of mining, long-term slope stability is an important consideration. Accordingly, the FEIS should consider changes in rock competence in the proposed pits which could occur as a result of natural variations in fracture density, fracture length and orientation, proximity to faults, and bedrock alteration intensity.

2. The geochemical test data available in the DEIs and the arid environment of the project area appear to suggest a low potential for acidification or contamination of meteoric waters as a consequence of the proposed project. However, we suggest that additional description of the deposit mineralogy and zonation be included in the FEIS. For example, the representativeness of the tested ore materials shown in Table 3.3-4 cannot be evaluated because their mineralogy is not described in the DEIS. This is an important consideration insofar as the moderately low neutralizing potential to acid generating potential (NP:AGP) ratios of the tested ore samples suggest the presence of sulfide minerals. Neither the DEIS or previous Castle Mountain Mine EIS/EIR clearly states the types and quantities of sulfide minerals present in the deposit that could oxidize to produce acid, with the exception of the general statement that the deposit "continue(s) to be very low in sulfides" (p. S-3 of DEIS). Moreover, neither document addresses the presence or absence of chemical or mineralogical zoning of the ore-bearing rock. As such, variations in the abundances of sulfide minerals throughout the deposit are not discussed. Two samples of ore have an average NP:AGP ratio of 2.7, which is below the 3:1 threshold, below which EPA recommends further testing (such as kinetic testing) to determine acid potential. In addition, protore samples were not tested. This material would be stockpiled for potential future processing. Consequently, the potential for acid generation from exposed pit walls or protore stockpiles is not definitively ruled out. The FEIS should provide additional info so that the representativeness of the samples and acid potential of protore & pit walls can be determined.

Furthermore, Method 1312 EP toxicity tests were conducted on 5 samples of mill and leach grade ore, 1 sample of leached ore, and 3 samples of overburden material. Metals were not detected in overburden samples and were below detection limits in the leached ore samples. Metals generally were not detected in ore samples with the exceptions of arsenic, chromium, and nickel which were present in 2 of the 5 ore samples; lead which was present in 3 samples; vanadium which was present in 1 sample; and barium which was present in 4 samples. In all cases, measured metals concentrations were significantly below the hazardous waste criteria established by the State of California.

The low content of soluble metals in most samples and the *presumably* low metal content of the deposit in general (the EIS/EIR states that base metals are "nonexistent" in the deposit)

indicate that contamination of surface or ground waters by metals is not expected to occur. However, the representativeness of the tested samples cannot be evaluated from the description of the deposit mineralogy, chemistry, and zonation provided in the DEIS. It should be noted that the sample of Lesley Ann pit sump water that was analyzed in June, 1996 contained arsenic at a concentration that was only slightly below the maximum contaminant level (MCL) established for drinking water by the State of California (0.045 mg/l sample vs. 0.05 mg/l MCL; Table 3.3-3). The FEIS should provide additional information so that the representativeness of the samples can be determined.

3. The DEIS does not discuss other regional utilization of ground water in the Lanfair Valley alluvial aquifer. If other wells exist or other utilization is occurring, the DEIS does not provide an analysis or discuss potential cumulative impacts that could occur from combined utilization. We suggest that the existence or non-existence of other uses of the aquifer be mentioned in the FEIS. If other uses occur, there should be an appropriate discussion of the significance or non-significance of potential cumulative impacts.

SUMMARY OF RATING DEFINITIONS AND FOLLOW-UP ACTION

Environmental Impact of the Action

LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of environmental quality, public health or welfare. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommend for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1-Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From: EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."